

Claims:

1. A data tag recovery apparatus (50) comprising:
 - 5 a photodetector (54) for generating an output signal in response to a received optical signal (120) comprising a data input signal and a data tag input signal, the data tag input signal having a different frequency to the data input signal;
 - 10 an amplifier (58) arranged to receive the output signal and generate an amplified signal;
 - 15 a data output module (64) being coupled to an output of the amplifier (58) for generating a data output signal corresponding to the data input signal;
 - 20 characterized in that: a data tag output module (90), having a frequency range corresponding to the frequency range of the data tag input signal, being coupled to the output of the amplifier (58) for generating a data tag output signal corresponding to the data tag input signal.
2. A data tag recovery apparatus (50) as claimed in Claim 1, wherein the photodetector (54) is a PIN photodiode or an avalanche photodiode.
3. A data tag recovery apparatus (50) as claimed in Claim 1 or Claim 2, wherein the amplifier (58) is a transimpedance amplifier.
- 25 4. A data tag recovery apparatus as claimed in Claim 3, wherein the output of the amplifier (58) is a differential output (60, 62).
- 30 5. A data tag recovery apparatus (50) as claimed in any one of the preceding claims, wherein the data output module (64) comprises a postamplifier (72) and means for AC coupling the postamplifier (72) to the amplifier (58).

6. A data tag recovery apparatus (50) as claimed in any one of the preceding claims, wherein the data tag output module (90) comprises a low frequency amplifier (100) and means for AC coupling the low frequency amplifier (100) to the amplifier (58).

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7. A data tag recovery apparatus as claimed in Claim 4, wherein the low frequency amplifier (100) is an operational amplifier.

10 8. A data tag recovery apparatus as claimed in any one of the preceding claims, wherein the data input signal is in the frequency range of four decades below the bit rate of the data input signal.

15 9. A data tag recovery apparatus as claimed in Claim 6, wherein the data tag input signal is below the frequency of 600 kHz for a 2.488 Gbit system.

10. A data tag recovery apparatus as claimed in Claim 6, wherein the data tag input signal is at a frequency of substantially 250 kHz for a 2.488
20 Gbit system.

11. A method of recovering a data tag signal, the method comprising the steps of:

25 generating an output signal in response to a received first input signal comprising a data input signal and a data tag input signal, the data tag input signal having a different frequency to the data input signal;

amplifying the output signal to generate an amplified signal;

processing the amplified signal to generate a data output signal corresponding to the data input signal;

30 characterised by: processing the amplified signal to generate a data tag output signal corresponding to the data tag input signal.